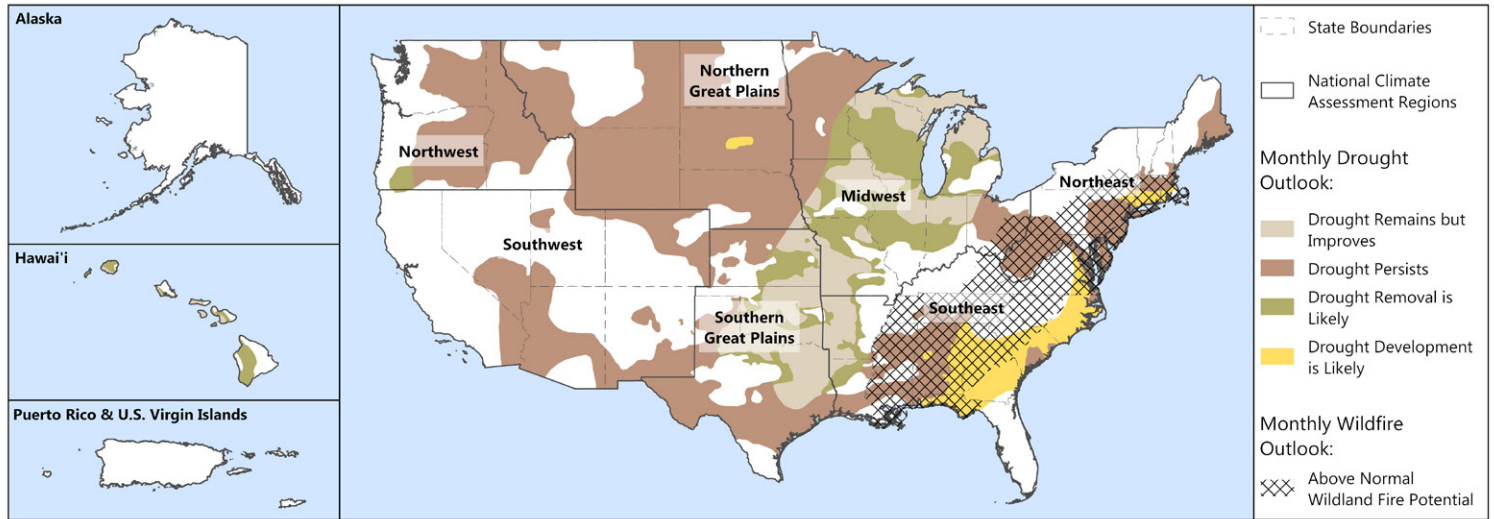


Highlights for this edition:

- Find your area’s forecast climate hazards for November including drought, wildfire, and hurricanes.
- Learn about health impacts & populations at risk for health harms from these climate hazards plus dust storms.
- Discover resources to help protect health, including special features on climate resilience hubs, winners of the HHS Environmental Justice Community Innovator Challenge, and an opportunity to comment on a NIOSH draft hazard review document on wildland fire smoke exposure among farmworkers and other outdoor workers.

November Regional Climate Hazard Forecasts:



6 Southeast: Above normal significant wildfire* potential is forecast for MS, AL, TN, and VA, plus eastern LA, the FL panhandle, most of GA, western NC and SC, and eastern KY. Drought persistence is forecast across central LA, much of MS and western AL, and small portions of southern TN, southeastern AR, northwestern GA, eastern SC, and northeastern NC. Drought development is forecast across much of GA and SC, portions of central and eastern AL and the FL panhandle, and across eastern NC and VA. Drought improvement and removal is forecast for portions of northern LA and western AR. The Atlantic basin is highly likely to have an above-normal hurricane season; November is the last month of hurricane season.

6 Northeast: Above normal significant wildfire potential is forecast for MA, CT, RI, DE, NJ, MD, WV, and large portions of NY and PA. Drought persistence is forecast across WV into western MD and southwestern PA, as well as across DE and D.C., portions of eastern MD and PA, across all of NJ into southern NY, across much of MA into southern VT and NH, and across eastern ME. Drought development is forecast across southern NY, much of CT and RI, and eastern MA.

6 Northwest: Drought persistence is forecast for much of eastern WA and OR and northern ID, and drought removal is forecast in parts of southern OR.

6 Midwest: Above normal significant wildfire potential is forecast for southeastern OH. Drought persistence is forecast for much of MN and OH and western IA. Drought removal and improvement is forecast across WI, much of MI and MO, northern IL and IN, eastern MN and IA, and northwestern OH.

6 Southwest: Drought persistence is forecast for portions of southern CA and NV, western UT, and across parts of AZ, CO, and NM.

6 Northern Great Plains: Drought persistence is forecast across WY and SD, and across much of MT, ND, and NE, with additional drought development forecast for central SD. Drought removal is forecast for the southeastern corner of NE.

6 Southern Great Plains: Drought persistence is forecast for much of western KS and across TX. Drought improvement is forecast in portions of eastern KS, northern and eastern TX, and much of OK. Drought removal is likely in portions of eastern KS and small areas of OK and TX.

6 Caribbean: The Atlantic basin is highly likely to have an above-normal hurricane season; November is the last month of hurricane season.

Drought Wildfire Hurricane

Check out additional forecasts on our [webpage](#).

*Smoke from wildfires can impact health hundreds of miles from the site of the fire.

Wildfire forecasts are derived from the National Interagency Coordination Center's [National Outlook](#), drought forecasts from the National Oceanic and Atmospheric Administration's (NOAA's) [Official Drought Outlook](#), and hurricane forecasts from NOAA's [2024 Hurricane Season Outlook](#).

Discover your county's forecast climate hazards this month:

1. Navigate to the [All Hazards map](#) from the Climate & Health Outlook Portal and click "Okay".
2. Zoom in on your county, either directly or by clicking the search icon on the top left, typing in your location, and hitting "Enter".
3. Click on your county on the map and a box will pop up with climate hazards for the current month and relevant risk factors.

Climate Resilience Hubs: La Familia Counseling Center Case Study

With increasing climate-related disasters like extreme heat, wildfires, and floods threatening health, [resilience hubs](#) are an emerging neighborhood-level strategy to prevent and mitigate the health impacts of climate change. Resilience hubs may have different names and functions in different places, but they are generally public-serving spaces (such as libraries, churches, or other trusted community spaces) that regularly provide resources such as health services, educational activities, and workforce development opportunities year-round, and provide shelter, food, water, medical aid, and access to communication and power during emergencies. By supporting community cohesion year-round, resilience hubs serve as a safe space that residents can trust and rely on during and after climate-related disasters.



Photo from LAFCC of groundbreaking event for their Opportunity Center on September 12, 2024.

[La Familia Counseling Center](#) (LAFCC) in South Sacramento has been providing multicultural counseling, outreach, and support services for children, youth, families, and individuals of diverse backgrounds for more than 50 years. LAFCC provided crucial testing and vaccination services to underserved populations throughout the COVID-19 pandemic. "We saw that our neighbors vulnerable to COVID-19 were also vulnerable to climate change," says Rachel Rios, LAFCC's Executive Director. "By bringing economic, educational, and clinical support to our neighborhood, we can help our neighborhood be resilient to the heat, floods, and wildfire smoke that threaten Sacramento." LAFCC partnered with the [Sacramento Promise Zone](#) and leveraged a broad coalition of federal, state, and local partners to grow its resilience hub capabilities. LAFCC recently received grants from the California Department of Food and Agriculture's Community Resilience Centers Program and from the U.S. Environmental Protection Agency's (EPA)'s [Community Change Grants program](#) to retrofit LAFCC's Maple Neighborhood Center and to construct a new Opportunity Center. The Opportunity Center will provide employment training, mental health services, and community health resources, positioning LAFCC as a crucial support system for residents year-round and during crises. The Maple Neighborhood Center, already a trusted gathering space, will be upgraded with energy-efficient technology and renewable energy systems, increasing its capacity to serve the community during climate emergencies.

HHS Environmental Justice Community Innovator Challenge Winners



Photo by Kiara Fite of Urban Harvest STL volunteer harvesting okra at their Rung for Women farm

The U.S. Department of Health and Human Services (HHS) recently announced the Phase 2 winners of the [Environmental Justice Community Innovator Challenge](#). Over the course of the two-phase challenge, HHS has awarded \$1 million dollars to 22 community-driven projects across the U.S. that address environmental justice and public health issues in areas that are being disproportionately impacted by environmental and climate-related hazards. Phase 1 of the Challenge was focused on designing innovative ideas to address environmental health disparities, and [descriptions of all Phase 1 Challenge winners were released earlier this year](#).

Phase 2 of the Challenge was focused on testing and implementing community-led efforts to address environmental health disparities and increase health equity. One Phase 2 winner, [Urban Harvest STL](#), will use their award to address public health issues in St. Louis, MO, by increasing equitable access to healthy food, providing urban farming training, and environmental justice education. Executive Director of Urban Harvest STL, Katie Houck, said, "Urban Harvest STL transforms neglected and abandoned urban spaces into thriving ecosystems. We use these spaces to ignite children's curiosity about the environment and where their food comes from. Our farms are living classrooms where aspiring farmers learn to grow healthy food for their communities. They bring together neighbors, cultivating a sense of unity and shared purpose." [Descriptions of all Phase 2 Challenge winners were released in September](#).

Drought

Drought Affects Health in Many Ways

Drought increases the risk for a diverse range of health outcomes. For example:



Low crop yields can result in rising food prices and shortages, potentially leading to **malnutrition**.



Dry soil can increase the number of particulates such as **dust and pollen** that are suspended in the air, which can irritate the respiratory system.



If there isn't enough water to flow, waterways may become stagnant breeding grounds for **disease vectors** such as mosquitoes.



Drought's complex economic consequences can increase **mood disorders, domestic violence, and suicide**.

People at Elevated Health Risk From Drought Exposure

According to [NOAA](#) & the Centers for Disease Control & Prevention ([CDC](#)), include those who:

- Have increased exposure to dust (e.g., are experiencing homelessness, work outdoors, or live/work in agricultural communities);
- Rely on water from private wells or small or poorly maintained municipal systems, the quality of which is more susceptible to environmental changes; and/or
- Have increased biologic sensitivity (e.g. are under age 5, are age 65 or over, are pregnant, have chronic health conditions, and/or have special needs in the event of a public health emergency).

Check out your drought forecast for November, along with top risk factors of concern in your county with our [Climate and Health Outlook Portal](#) and [learn more about health impacts and how to prevent them](#).

Resources to Reduce Health Risks Associated With Drought

- Learn about the health implications of drought and how to prepare from the [CDC Drought and Health site](#) and [Ready.gov Drought site](#).
- Call or text 1-800-985-5990 to get help and support for any distress that you or someone you care about may be feeling related to any disaster. This Substance Abuse and Mental Health Services Administration (SAMHSA) [Helpline and Text Service](#) is available 24/7, free, and staffed by trained crisis counselors.

Preventing Health Impacts from Dust Storms

Dust is made up of small solid particles called particulate matter. The small particles found in dust storms can enter the lungs and damage lung tissue. Dust storms occur when particles blow so thickly that it is hard to see the other side of the road. Dust storms can carry particles that include minerals, allergens, organic matter, and environmental pollutants that can be dangerous when inhaled. Exposure to particles carried by dust storms can therefore worsen or cause health problems such as allergies, asthma, acute bronchitis, sinus infections, valley fever, and pneumonia.

Dust storms can last from just a few hours to a couple of days. They are most common in the [southwestern U.S.](#) and occur most frequently during the spring and summer. The occurrence of dust storms in the U.S. has [increased since 1993](#). Our changing climate is predicted to further [increase the frequency and spread of dust storms around the world](#).



Prevention tips for minimizing health impacts during dust storms:

- Stay indoors as much as you can;
- If you must go out, minimize your time outside and avoid strenuous activity; and
- Cover your nose and mouth with a National Institute for Occupational Safety and Health (NIOSH)-approved N95 respirator to protect against inhaling large particles.

Individuals facing the highest risk of health problems from exposure to dust storms include infants, children, and teens; older adults; people with asthma, bronchitis, emphysema, or other respiratory conditions; people with heart disease; pregnant individuals; and healthy adults working or exercising

vigorously outdoors (for example, agricultural workers, construction workers, and runners). While inhaling large particles can be avoided by covering your nose and mouth, small particles can still enter your respiratory system, making fine dust the most harmful. Therefore, anyone at risk of exposure to dust storms should take precautions. Stay informed about your [local air quality conditions](#) and follow your local public health guidelines.

Wildfire

People at Elevated Health Risk From Wildfire Smoke Exposure

According to the [EPA](#) include those who:

- Have increased biologic sensitivity (e.g., are under age 5, are age 65 or over, are pregnant, and/or have chronic health conditions such as asthma or another lung disease or a cardiovascular disease); and/or
- Face economic, social, environmental, and/or other burdens that may limit their ability to reduce exposure (e.g., identify as a racial or ethnic minority, have low-income, have one or more disabilities, and/or work outdoors).







Check out your wildfire forecast for November, along with top risk factors of concern in your county with our [Climate and Health Outlook Portal](#) and [learn how to protect people at elevated risk](#).

Resources to Reduce Health Risks Associated With Wildfire

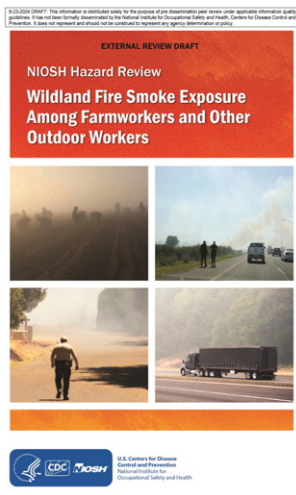
- Learn about how to prepare for wildfires, stay safe during a fire, and return home after a fire with resources from the Federal Emergency Management Agency (FEMA)'s [Ready.gov](#), [CDC](#), and [EPA](#).
- Download the [FEMA App](#) to receive real-time weather and emergency alerts from the National Weather Service and help you find a nearby shelter in case of evacuation.
- Check out [EPA & CDC's Wildfire Smoke and Your Patients' Health course](#) for actions to help patients reduce exposure.
- Discover specific recommendations for [older adults](#), [people experiencing homelessness](#), [people with access and functional needs](#), and [people with disabilities](#).

Wildfires Affect Health in Many Ways

Wildland fire increases the risk for a diverse range of health outcomes from both the fire itself and smoke. For example:

-  Due to the nature of their work, firefighters are at risk of developing severe heat-related illness (such as **heat stroke**) and rhabdomyolysis (**muscle breakdown**).
-  Wildfire can cause **burns** through contact with flames and hot surfaces.
-  Wildfire smoke can lead to disorders including **reduced lung function**, **bronchitis**, exacerbation of **asthma**, and cardiovascular effects like **heart failure**.
-  For pregnant people, smoke exposure may increase the risk of **reduced birth weight** and **preterm birth**.
-  Wildfire smoke may affect the immune system, potentially leading to increased vulnerability to **lung infections**.
-  Smoke from wildfires can travel downwind and affect air quality hundreds of miles away from the fire.

NIOSH Seeks Public Comment on Draft Hazard Review Document: Wildland Fire Smoke Exposure Among Farmworkers and Other Outdoor Workers



In our [June edition](#), we shared information on farmworkers' inequitable exposure to wildfire smoke. Since then, CDC's NIOSH released a draft [Hazard Review: Wildland Fire Smoke Exposure Among Farmworkers and Other Outdoor Workers](#) in the Federal Register for public comment and technical review. This draft Hazard Review is the first federal-level authoritative document with a focus on wildland fire smoke for outdoor workers. It will increase awareness about the overall risk of exposure to wildland fire smoke on outdoor worker health.

This draft Hazard Review aims to provide a comprehensive review of the available science and recommendations to address the potential hazards for outdoor workers exposed to wildland fire smoke. NIOSH estimates that approximately 20 million outdoor workers in the U.S. were potentially exposed to wildland fire smoke in 2023. The draft Hazard Review addresses the risks faced by these outdoor workers exposed to wildland fire smoke, such as farmworkers and construction workers. NIOSH proposes recommendations to reduce outdoor worker exposures through a [hierarchy of controls](#) approach. This approach includes prioritizing engineering controls (such as air filtration), then administrative controls (such as altering work schedules), and finally, personal protective equipment. NIOSH suggests using the EPA's Air Quality Index to assess PM2.5 levels to determine the severity of exposure and necessary controls.

The document can drive the development of new, innovative control options and may stimulate new research and inform policies that better protect outdoor workers from the growing threat of wildland fire smoke exposure. [Public comments](#) on the draft document have been extended and will be accepted through **January 10, 2025**. NIOSH will convene a webinar on Tuesday, December 3, 2024, at 1:00 PM Eastern Time (U.S. and Canada) to present an overview of the draft Hazard Review and provide information about the public comment period. Attendees should [register in advance](#) for this webinar.

THANK YOU to the partners who provide invaluable information, expertise, and data for the Climate and Health Outlook series:

